

**PATENT**

Atty Docket No.: 10014315-1

App. Ser. No.: 10/004,211

**REMARKS**

Favorable reconsideration of this application is respectfully requested in view of the following remarks. Claims 1-29 are pending in the present application, of which, Claims 1, 13, 23, 26, and 29 are independent claims. By virtue of the amendments above, Claims 1-3, 5-9, 11-15, 17-21, 23, 24, 26, 27, and 29 have been amended without prejudice or disclaimer of the subject matter contained therein.

No new matter has been introduced by way of the amendments above and entry thereof is respectfully requested.

**Claim Rejection Under 35 U.S.C. §103**

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in MPEP § 706.02(j):

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Therefore, if the above-identified criteria are not met, then the cited reference(s) fails to render obvious the claimed invention and, thus, the claimed invention is distinguishable over the cited reference(s).

Claims 1-29 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,918,223 to Blum et al. in view of U.S. Patent No. 6,630,621 to

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Yamada et al. This rejection is respectfully traversed because Blum et al. and Yamada et al., considered singly or in combination, fail to teach or suggest the claimed invention as set forth in Claims 1, 13, 23, 26, and 29 and the claims that depend therefrom.

The Official Action asserts that Blum et al. discloses all of the features claimed in Claims 1, 13, 23, 26, and 29 of the present invention except that Blum et al. fails to disclose that a sample of audio data of music to be identified is recorded. In setting forth this rejection, the Official Action interprets the rhythm feature vector disclosed in Blum et al. as being equivalent to the "sample time signal" and the "time signal" claimed in Claims 1, 13, 23, 26, and 29 of the present invention. It is respectfully submitted, however, that the "rhythm feature vector" differs substantially from the time signal elements of Claims 1, 13, 23, 26, and 29. This distinction has been made clearer by virtue of the amendments to these claims.

These claims have been amended, more particularly and in various respects, to include that the time signals are processed and the manners in which the processed sample time signal and the processed time signal are derived or means for deriving these processed time signals. Support for these amendments to the claims may at least be found in the bridging paragraph of pages 4 and 5 of the instant Specification.

**Claims 1-12 and 23-25**

Claims 1 and 23 of the present invention have been amended to include that the "processed sample time signal" is derived from the recorded sample of audio data of the music to be identified by filtering and downsampling of the sample of audio data. Claims 1 and 23 have also been amended to include that the "processed time signal" includes time

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signals that have been processed through filtering and downsampling. In addition, Claims 1 and 23 include that the processed sample time signal for the recorded sample of audio data is matched with the processed time signal of a song in a plurality of songs.

A "feature vector" is described in Blum et al. as "the mean and standard deviation of each of the trajectories (amplitude, pitch, brightness, bass, bandwidth, and MFCCs... These numbers are the only information used in the content-based classification and retrieval of these sounds..." Column 6, lines 45-53. "Feature vectors", therefore, pertain to some aspect of a sound file and are not defined in Blum et al. as being "processed", that is, being derived from a sample of audio data by filtering and downsampling of the sample of audio data. In addition, Blum et al. discloses that the sound files are classified and retrieved based only on these numbers.

The "processed sample time signal" and the "processed time signal" therefore differ from "feature vectors". In fact, the present invention as set forth, for instance, in Claim 2, states that "sample feature vectors" may be generated for the "processed sample time signal" and that "feature vectors" for the processed time signals of the songs may also be generated. Claim 2 also states that the songs are sorted according to the feature space distance between the sample feature vector and the feature vectors of each processed time signal. In this regard, the feature vectors may be employed in the present invention for sorting the songs and are not necessarily employed for matching songs to be identified with songs in a database.

Therefore, with respect to Claims 1 and 23 of the present invention, Blum et al. does not appear to disclose that a processed sample time signal is derived from a sample of audio data by filtering and downsampling of the sample of audio data. Blum et al. also does not appear to disclose that the processed sample time signal is matched with a processed time

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signal, where each of the processed time signals has been processed through filtering and downsampling. Instead, Blum et al. discloses that sounds are matched through feature vector comparisons.

For at least the foregoing reasons, it is respectfully submitted that Blum et al. fails to disclose all of the features of Claims 1 and 23 as asserted in the Official Action. In addition, Yamada et al. fails to make up for the deficiencies in Blum et al. More particularly, for instance, Yamada et al. fails to disclose a sample time signal and a time signal as recited in Claims 1 and 23 of the present invention. As such, the proposed modification of Blum et al. based upon the disclosure contained in Yamada et al. would still fail to disclose the present invention as set forth in Claims 1 and 23. Accordingly, the Examiner is respectfully requested to withdraw the rejection of Claims 1 and 23 and to issue an allowance of these claims.

Claims 2-12 depend from allowable Claim 1 and Claims 24 and 25 depend from allowable Claim 23 and are also allowable over the documents cited in the Official Action at least by virtue of their dependencies. Claims 2-12 are further allowable over the cited documents because the cited documents fail to disclose, for instance, that a sample feature vector is generated for a processed sample time signal, that a feature vector is generated for each processed time signal, and that songs are sorted based on the sample feature vector and their respective feature vectors. Claims 24 and 25 are further allowable over the cited documents because the cited documents fail to disclose that a signal match intensity for the plurality of processed time signals are computed in relation to the processed sample time signal and that a processed time signal having the maximum signal match intensity is selected for presentation to a user.

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**Claims 13 and 26**

With respect now to Claims 13 and 26, it is respectfully submitted that Blum et al. and Yamada et al. fail to disclose the features claimed therein for reasons similar to those described above with respect to Claims 1 and 23. More particularly, Claims 13 and 26 relate to systems comprising means for performing the steps outlined in Claims 1 and 23, respectively. In one regard, because Blum et al. and Yamada et al. fail to disclose the steps outlined in Claims 1 and 23 at least for the reasons set forth above, these documents also fail to disclose means for performing those steps. Accordingly, the Examiner is respectfully requested to withdraw the rejection of Claims 13 and 26 and to allow these claims.

Claims 14-22 depend from allowable Claim 13 and Claims 27 and 28 depend from allowable Claim 26 and are also allowable over the documents cited in the Official Action at least by virtue of their dependencies upon allowable claims. Claims 14-22, 27 and 28 are further allowable over the cited documents for reasons similar to those set forth above with respect to Claims 2-12, 24, and 25.

**Claim 29**

The Official Action asserts that the combined disclosures of Blum et al. and Yamada et al. disclose all of the features of Claim 29 of the present invention for the same reasons as those presented with respect to Claims 1-28. It is respectfully submitted, however, that Claim 29 contains features in addition to those claimed in Claims 1-28, which the Official Action has failed to address. For instance, Claim 29 recites that a plurality of processed time signals are generated from a sample of recorded audio data in distinct frequency bands and that a second plurality of processed time signals are generated from songs in the same distinct

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frequency bands as the first plurality of time signals. Claim 29 also includes that the first plurality of processed time signals is matched with the second plurality of processed time signals.

The Official Action has therefore failed to establish a *prima facie* case of obviousness by failing to at least address these features in Claim 29. In addition, it is respectfully submitted that neither Blum et al. nor Yamada et al. appear to disclose that a first plurality and a second plurality of processed time signals are generated in the same distinct frequency bands. As such, the Examiner is respectfully requested to withdraw the rejection of Claim 29 as allegedly being obvious in view of the disclosures contained in Blum et al. and Yamada et al. and to issue an indication that Claim 29 is allowable over the disclosures contained in these documents.

**Conclusion**

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please

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grant any required extensions of time and charge any fees due in connection with this request  
to deposit account no. 08-2025.

Respectfully submitted,

Dated: June 27, 2005

By

  
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